

Page 5 of 8

simultaneously at the process of filling resin inside the stator 22 for stability and reinforcement . . . .

The aforementioned plurality of bearing balls 30 are disposed so as to be sandwiched between the inner surface 29b of the boss 29 and the front end of the rotor sleeve. (Emphasis added;,, page 7, lines 9-21)

The integral nature of the boss and stator stabilizes and reinforces the overall structure, and also reduces the cost of the overall device, as a separate ball bearing assembly is not required to be separately prepared and then attached. (Page 9, lines 1-2)

Claim 1 has now been amended to specify that the boss is formed with the stator:

1. A motor comprising:
  - a rotor including a shaft and a magnet surrounding a portion of the shaft;
  - a stator surrounding the magnet of the rotor with a gap therebetween, and adapted to generate a magnetic field thereby causing the rotor to rotate around an axis of the shaft;
  - a rotor sleeve having a cylindrical portion and a flange provided at one end of the cylindrical portion, the rotor sleeve being provided between the magnet and the shaft so as to fixedly hold the magnet and the shaft together;
  - a boss having a circular shape with a center hole for allowing the shaft to rotatably pass therethrough, and being formed with the stator so as to oppose the flange of the rotor sleeve; and
  - a plurality of bearing balls rotatably disposed between the boss and flange of the rotor sleeve. (Emphasis added)

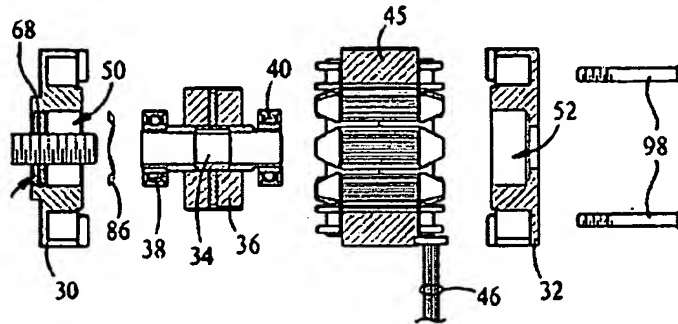
Certain of the pending claims have been rejected as either anticipated under 35 U.S.C. 102(e) by U.S. patent no. 6,603,229 ("the Toye patent"), or obvious under 35 U.S.C. 103 in view of the Toye patent considered in light of other references. These claim rejections are overcome as follows.

As a threshold matter, the Examiner is reminded that claim 1 stands rejected as anticipated, and not merely obvious, in light of the references relied upon by the Examiner:

[t]he distinction between rejections based on 35 U.S.C. 102 and those based on 35 U.S.C. 103 should be kept in mind. Under the former, the claim is anticipated by the reference. No question of obviousness is present. In other words, for anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. (Emphasis added; MPEP 706.02)

Here, the Toye patent fails entirely to teach an apparatus having a bearing boss formed with the stator.

Figure 1 (reproduced in part below) of the Toye patent shows an exploded view:



In contrast with the pending claims, the Toye patent assembly includes ball bearings (38, 40) and a stator structure (45) secured within separate bell pieces (30, 32) by machine screws 98. The Toye patent contains absolutely no teaching, either implicit or explicit, regarding a structure wherein the ball bearings are bossed within a structure formed with the stator.

Moreover, the Examiner is further reminded that in order to establish a prima facie case of obviousness, "the prior art reference (or references when combined) must teach or suggest all the claim limitations." (Emphasis added; MPEP 2143) As shown and described above, the Toye patent shows only an assembly comprising a separate stator structure enclosed within bell pieces. There is absolutely no teaching or even suggestion in any of the references relied upon by the Examiner, of a boss structure formed with a stator. Inclusion of either of the additional patents (to Nagata or Kiyoshi) relied upon by the Examiner does nothing to cure this lack of teaching. Specifically, these Japanese patent references do not show stator and bearing boss elements formed together.

Based upon the failure of the art relied upon by the Examiner to teach, or even suggest, every element of the pending claims, it is respectfully asserted that the claims cannot be considered anticipated or obvious in light of the references. Continued rejection of the pending claims is improper, and the claim rejections should be withdrawn.

In conclusion, the Examiner had indicated claims 2 and 4-5 to be allowable if rewritten to include the elements of the parent and any intervening dependent claims. Applicants appreciate the Examiner's indication of allowable subject matter. However, as described in detail above, Applicants maintain the allowability of all of the pending claims, and therefore decline to amend claims 2 and 4-5 in the manner suggested by the Examiner.

Finally, Applicants have also added new claim 12 to specify that the motor is a stepping motor. No new matter is introduced by this amendment to the claims, and support for new claim 12 is present in the application as originally filed, at least at page 6, line 4.

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



Kent J. Tobin  
Reg. No. 39,496

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, California 94111-3834  
Tel: 650-326-2400  
Fax: 415-576-0300  
Attachments  
KJT:ejt  
60436567 v1